

# (12) United States Patent Hattori et al.

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# (54) INITIALIZATION OF PHASE-CHANGE OPTICAL RECORDING MEDIUM

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#### 57) ABSTRACT

A method of initializing a phase-change optical information recording medium is provided, using an optical system incorporating a semiconductor laser device. The laser device is characterized by a specified spatial power distribution. In a spatial distribution of the laser power focused on the recording medium, in the direction perpendicular to guide tracks the laser device preferably has less average smaller in both end regions of the spatial distribution, which have each 10% of the width at half maximum of the distribution, than the average in the center region of the full width at half maximum of the distribution.

### 13 Claims, 7 Drawing Sheets



